

# TTO4IRCCS

## LICENSING OPPORTUNITIES

# BLOOD ANTICOAGULATION SYSTEM FOR EXTRACORPOREAL CIRCUITS

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#### Applications:

- Dialysis.
- Apheresis.
- Infused citrate removal.



#### Key benefits:

- Regional anticoagulation of high extracorporeal blood flows (> 200 mL/min).
- Reduction of systemic side effects.



#### Offer:

- Licensing out.
- Co-development



## BLOOD ANTICOAGULATION SYSTEM FOR EXTRACORPOREAL CIRCUITS

### INVENTION

Innovative system equipped with ion-exchange resins capable of removing citrate from the blood.

### BACKGROUND

The contact of the blood with non-biological surfaces causes the activation of the coagulation cascade and that is why any extracorporeal treatment of the blood requires anticoagulant therapy. The systems designed to keep anticoagulated the blood in extracorporeal circuits involve the use of anticoagulants which, such as heparin, act systemically over all the patient's blood or which, like citrate, are infused directly at the beginning of the circuit anticoagulating only the extracorporeal blood. The use of heparin, having a systemic effect, increases the risk of bleeding complications; the use of citrate, having a local effect in the extracorporeal circuit, prevents this complication but, having a limited clearance, allows anticoagulation blood flows not exceeding 200 mL /min, threshold that can be crossed only causing high systemic toxicity.

### TECHNOLOGY

This innovative system ensures regional anticoagulation of high extracorporeal blood flows through the infusion of citrate and prevents toxicity from systemic accumulation of citrate. Our solution solves eventual issues through the introduction of a secondary circuit equipped with a combination of ion exchange resins that remove most of the infused citrate. This system allows regional anticoagulation of high extracorporeal blood flows without incurring in the complications related to the systemic accumulation of citrate.

### INVENTORS

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### INTELLECTUAL PROPERTY RIGHTS

Patent granted in Italy.

Patent pending in Europe and USA.

### OFFER

Licensing out.

Co-development.

### CONTACT

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